Park-pinned fold-down wall drying ladder

Lower one complete rod drying ladder from vertical storage onto two hard horizontal stops and two outboard support ties, then empty it, raise it by hand and retain it with two separate parking pins.

Scope and receiving limits

A sheltered attended household cloth-airing component, not a seat, step, handrail, child barrier or lifting appliance. The rods, straps, pins, clamps and backing have no author load or durability test. No universal safe garment mass, drying rate or wall capacity is supplied.

Install only on the specified separately secured full timber practice backing. Eight measured through joints define the backboard-to-backing connection; upstream support to the building/test fixture remains a site-specific input. Never substitute drywall-only fixings or conceal an unknown cavity.

Only the stated hand-controlled 0..90 degree fold is covered. Empty before moving. A helper controls both textile bights in their OUTBOARD lanes throughout folding; arbitrary loose straps through the ladder, pins or hinges are excluded. The positive park pins are fitted before straps are bundled.

US customary actual inches control. Reference millimeters=inches x 25.4. X left/right; Y out from the backboard rear; Z up from the pivot line.

Ordinary finished lengths +/-1/32 in and wood gauges +/-0.010. Receive the assembled arm outside span 30 +/-1/32, each arm X width 1 1/2 +/-1/32, rod length 29 15/16 +/-1/64 and rod diameter .495.. .505. Actual bore diameters and clearances below govern; no oversized forced joint or automatic wall-load assumption.

Actual cuts and machining

XYZ is the installed reference orientation. Nominal board names are not finished dimensions. Common material for A/B/C/E/F/G/H/K/L: Sound straight untreated hardwood or dimensionally stable exterior-bond plywood at the stated ACTUAL gauge; reject splits, loose plies or a twisted bearing face.

A / Full-height backboard, quantity 2. 5 1/2 x 3/4 x 20 in (139.7 x 19.05 x 508 mm). Left X -3..2 1/2, right 27 1/2..33; Y 0..3/4, Z -3..17. Keep rear flat for through-backing contact.

B / Pivoting side arm, quantity 2. 1 1/2 x 20 x 3/4 in (38.1 x 508 x 19.05 mm). Open pose: X 0..1 1/2 and 28 1/2..30; Y 1 1/2..21 1/2, Z -3/8..3/8. Pivot 9/32 in across X at Y 2 1/4, Z 0. Stowed park 9/32 bore transfers from H at local Y 17 1/2, Z 0, clear of rods. Five rod bores 17/32 in across X at Y 5 1/4, 8 3/4, 12 1/4, 15 3/4, 19 1/4 and Z 0.

C / Full-width front rail, quantity 1. 36 x 1 1/2 x 3/4 in (914.4 x 38.1 x 19.05 mm). Open X -3..33, Y 20..21 1/2, Z 3/8..1 1/8. Fit ON TOP of both arms, not between them. Four downward screws: X 3/4 or 29 1/4 crossed with Y 20 3/8, 21 1/8. Outboard ends carry strap clamps.

D / Removable round drying rod, quantity 5. 29 15/16 x 1/2 x 1/2 in (760.41 x 12.7 x 12.7 mm). Cylinder along X. Finish 29 15/16 +/-1/64; place between outer cap faces nominal X 0 and 30, not a 30 in long forced fit. Caps retain both ends; no glue is needed.

Smooth straight hardwood round stock; actual diameter .495.. .505, ends blunt; no food-contact use claimed.

E / Individual rod-end cover, quantity 10. 1/4 x 1 1/2 x 3/4 in (6.35 x 38.1 x 19.05 mm). Two per rod, left X -1/4..0 and right 30..30 1/4; centered Y on each D, Z -3/8..3/8. Two pan screws per cover at Y rod -1/2 and rod+1/2, Z 0, directed into the arm along X. Separate covers leave the park-bracket corridor clear.

F / Low pivot receiver cheek, quantity 4. 3/4 x 3 x 3 1/2 in (19.05 x 76.2 x 88.9 mm). Y 3/4..3 3/4, Z -3..+1/2, NOT centered about Z 0. Left X -13/16..-1/16 and 1 9/16..2 5/16; right 27 11/16..28 7/16 and 30 1/16..30 13/16. Bore 9/32 across X at Y 2 1/4, Z 0. Rear attachment screws at Z -2 1/2,-1 1/2.

G / Between-cheek downward stop, quantity 2. 1 5/8 x 1 x 3/4 in (41.27 x 25.4 x 19.05 mm). Left X -1/16..1 9/16, right 28 7/16..30 1/16; Y 2 3/4..3 3/4, Z -1 1/8..-3/8. The arm underside rests on this TOP at horizontal 0 degrees. Do not extend G rearward below the pivot tail.

H / Outboard parking receiver, quantity 2. 3/4 x 3 x 1 1/4 in (19.05 x 76.2 x 31.75 mm). Left X -1..-1/4, right 30 1/4..31; Y 3/4..3 3/4, Z 14 5/8..15 7/8. Park 9/32 in X bore at Y 2 1/4, Z 15 1/4. Attachment screw rows Z

14 7/8, 15 5/8. Set actual inside-face gap to the nominal arm outside face 1/4..5/16 in before transferring attachments; this is wider than the lower pivot gap.

I / Captured parking pin, quantity 2. 3 1/2 x 1/4 x 1/4 in (88.9 x 6.35 x 6.35 mm). Left inserted span X -1 1/2..2; right mirror X 28..31 1/2. Finish length 3 1/2 +/-1/64 in. Cross-drill 3/32 in at 1/8 +/-1/64 from both ends in a clamped metal cradle. Fitted cotters remain outside the receiver and arm, throughout axial play.

304 stainless round stock, received diameter .248.. .250; blunt, fully deburred.

J / Outboard support-tie blank, quantity 2. 1 x 0.06 x 32 in (25.4 x 1.52 x 812.8 mm). 32 in is STARTING STOCK, not the taut finished chord. Fold the last 1/2 in under at each end; clamp two layers over a full 1 1/2 in end engagement. Set actual length with the empty ladder resting on both hard stops, then trim surplus leaving the folded tails.

Sailrite 1 in gray flat polyester webbing, SKU PLLWGY, published nominal thickness .045 in; receive actual single-layer gauge t .040.. .060 and unspliced continuous blanks.

K / Webbing clamp plate, quantity 4. 1 3/4 x 1/4 x 1 1/2 in (44.45 x 6.35 x 38.1 mm). Two fixed plates on A: X -2 7/8..-1 1/8 or 31 1/8..32 7/8; Z 14 5/8..16 1/8, front Y 3/4+2 t..1+2 t. Two rack plates on C: same X, Y 20..21 1/2, Z 1 1/8+2 t..1 3/8+2 t. Fixed axes X -2+/-5/8 or 32+/-5/8, Z 15 3/8; rack axes same X, Y 20 3/4.

L / Specified practice backing, quantity 2. 3 1/2 x 1 1/2 x 30 in (88.9 x 38.1 x 762 mm). Provide separately secured solid timber at left X -1..2 1/2 and right 27 1/2..31, Y -1 1/2..0, Z -6..24. These are receiving sections, not self-standing wall posts.

Hardware and actual purchased interfaces

W1 / 12 / #10 x 3 in stainless flat-head wood screw. Eight for four F and four for two H, from backboard rear Y 0 through .75 A into 2.25 in receiver. Major OD<=.190, head OD<=3/8. Flush rear heads before mounting to backing.

W2 / 4 / #8 x 1 1/4 in stainless flat-head wood screw. Two through each cheek pair into the G ends, total 4. Major OD<=.164, head OD<=5/16. Same-axis opposing tips remain 5/8 in apart nominally.

W3 / 4 / #8 x 1 1/4 in stainless flat-head wood screw. Front rail C down into B, four total. Same head/major limits as W2; no point below arm underside.

W4 / 20 / #4 x 1 in stainless pan-head wood screw. Two per E at Y rod+/-1/2, Z 0. Head OD<=.225, H<=.085, major OD<=.112. Each crosses 1/4 in cover and enters 3/4 in arm; screw rows miss the 1/2 in rod.

W5 / 8 / #6 x 3/4 in stainless pan-head wood screw. Two outside-webbing screws per K; major OD<=.138, head OD<=1/4, H<=1/8. Cross 1/4 in plate and two layers of webbing only if fabric reaches the axis; do not rely on a longer screw or a nominal cloth gauge. Actual bare-wood points stay buried.

P1 / 2 / 1/4-20 x 4 in full-thread hex bolt. Lower pivots. Actual major OD .240.. .250, head corner OD<=.520, H<=.180. Left under-head X -7/8, tip 3 1/8; right under-head 30 7/8, tip 26 7/8. Both axes Y 2 1/4, Z 0. Actual free arm axial clearance 1/32..3/32 with both thrust washers; do not clamp the moving arm solid.

P2 / 4 / 1/4 outer flat washer. OD<=3/4, actual thickness 1/16 +/-0.005, one under bolt head and one under nylon nut at each pivot.

P3 / 4 / 1/4 thrust washer. OD<=3/4, actual thickness 1/32 +/-0.003; one either side of each moving arm. Bore freely passes actual P1.

P4 / 2 / 1/4-20 nylon locknut. Height<=.230, corner OD<=.520. Lock the setting without squeezing cheeks; verify 2 full protruding threads and the actual running clearance.

P5 / 4 / 5/64 x 3/4 in stainless cotter. Two per I. Crosshole 3/32; fold smooth, radial stop>=3/16 from pin axis and ENTIRE fitted radial envelope<=3/8 and axial half-envelope<=1/8 about its crosshole. Actual outside contact constrains pin translation; do not bend a tine along the main pin. A cotter is not a rated safety device. Remove the inner cotter before pulling a park pin outward; the outer cotter can stay fitted.

M1 / 8 / 1/4-20 x 3 1/4 in full-thread hex bolt. A-to-L joints at X 1 or 29 crossed with Z -2, 5, 12, 16 1/2. Head corner OD<=.520, H<=.180. No assumed load rating.

M2 / 16 / 1/4 flat washer. OD<=3/4, actual 1/16 +/-0.005; two per M1 joint.

M3 / 8 / 1/4-20 nylon locknut. Height<=.230, corner OD<=.520. Two complete threads beyond actual nylon; reserve 1 in rear access.

T1 / 2 / Removable hook-and-loop keeper band. Nominal 1 x 6 in, actual width<=1 and length 6..7; Wraps ONLY the folded slack together with its already anchored/return webbing strand within the existing outboard X lane and rearward Y band, after both park pins are engaged. Never wrap a keeper around the whole 5 1/2 in backboard. It carries no drying load. Separate helper control is required during movement.

Tools and setup

Rule, square, depth rule, caliper, drill/driver, supported saw and clamps. Keep a helper available for mounting and every empty fold/service.

9/32 in actual pivot/park bores received .28125.. .285; 17/32 rod bores received .523.. .539. Register matching receiver parts before final assembly.

3/16 in #8 and 13/64 in #10 first-member clearance, 5/32 for #4 covers, 9/64 for #6 clamps; actual wood-appropriate full cylindrical pilots plus measured drill points and reserve; metal cradle with 3/32 cross drill and deburring file.

Numbered build and service

01. Locate the pivot line at an accessible chosen height on the specified separately secured L practice backing; all Z figures are relative to that line. Reserve 22 in out from the backboards, 32 in clear to one side for rod removal, 24 in above the line and an outboard textile lane on each side. Do not attach to unknown wall lining or set a load from this guide.

02. Cut A-H and K to their actual dimensions. Keep 1/8 in kerf outside each finished line. Mark each receiver F TOP at Z+1/2 and BOTTOM at Z -3; the pivot hole is NOT centered in its 3 1/2 in height. This low top is required so the first outboard rod cover clears during folding.

03. Stack/register both F pairs and bore 9/32 along X at their actual Y 2 1/4, Z 0 axes. Mark B bores 3/4 in from their rear ends, centered in 3/4 in thickness. Receive bore .28125.. .285 and bolt major .240.. .250, with actual coaxial alignment that allows a hand-supported swing without racking. Do not enlarge a drifting bore to force the frame level.

04. On each B register the five rod axes at Y 5 1/4, 8 3/4, 12 1/4, 15 3/4, 19 1/4, Z 0. Drill 17/32 across the 1 1/2 in X width with a backer; receive .523.. .539. Cut five D to 29 15/16 +/-1/64 from round stock and smooth the ends. Set the assembled outside span to 30 +/-1/32; no rod is glued or forced into an oversize outside span.

05. Set C on TOP of the two arms at X -3..33, Y 20..21 1/2, Z 3/8..1 1/8. Use four W3 downward at X 3/4 or 29 1/4, Y 20 3/8 and 21 1/8. Each crosses 3/4 in C and enters 1/2 in B, with nominal 1/4 in wood below its tip. Drill first-member clearance and full 1/2 in receiving pilot plus measured point/1/32 reserve, total<=5/8 in.

06. Insert all five rods and center their nominal 1/16 in total end space. Fit all ten E covers over the outer arm faces, one at each rod end. Use two W4 per cover at Y rod+/-1/2, Z 0, left from X -1/4 toward +3/4 and right from 30 1/4 toward 29 1/4. A full 3/4 in receiving pilot plus measured point/1/32 reserve must remain<=7/8 in of the 1 1/2 in arm. The screws miss the rod bore; the separate covers keep the park corridor open.

07. Fasten F to the A fronts at the four exact X lanes in the cut list, Y 3/4..3 3/4, Z -3..+1/2. From A rear use two W1 per F at Z -2 1/2,-1 1/2, on each cheek X center. Each crosses 3/4 in A and enters 2 1/4 in the cheek. Use 13/64 in clearance through A, then trial a suitable #10 pilot: full 2 1/4 in cylinder plus measured point and 1/32 reserve, total<=2 1/2 in of the 3 in cheek depth.

08. Fit G between each F pair at Y 2 3/4..3 3/4, Z -1 1/8..-3/8. Drive one W2 from each outside cheek face at Y 3 1/4, Z -3/4. Each crosses 3/4 in F and enters 1/2 in G; opposing nominal tips remain 5/8 in apart. These hard blocks, not a strap length alone, stop downward rotation at horizontal. Keep their rear edges clear of the swinging arm tails.

09. Fit each H OUTBOARD receiver at the listed X lane, Y 3/4..3 3/4, Z 14 5/8..15 7/8. Use two W1 from A rear at Z 14 7/8, 15 5/8 and the receiver X center; full 2 1/4 in pilot budget is as for F. These rows are 3/8 in from the park axis, not through it.

10. Mount both backboards to their actual L sections with eight M1 and sixteen M2 at X 1 or 29, Z -2, 5, 12, 16 1/2. Rear surfaces and all wood-screw heads must lie flat. Nominal A+L+two washers+nut stack is .75+1.5+.125+.230=2.605 in, leaving .645 in thread from 3 1/4. Verify actual seating and 2 full threads. This complete bolted joint does not approve upstream backing support.

11. With a helper taking the entire ladder weight, place B between the lower F pairs, with one P3 each side. Fit P1 with outside P2 washers and P4 nuts. The nominal 1 5/8 gap contains 1 1/2 in arm plus 1/16 thrust washers, leaving 1/16 total free space. Lock each nut at actual 1/32..3/32 axial running clearance, keep both receiver cheeks square and check two full exposed threads; never tighten wood into a bind.

12. Lower the EMPTY ladder by hand onto BOTH G tops. Confirm both arm undersides are supported at 0 degrees without racking. At the nominal pivot-to-front geometry all rods lie beyond Y 5 and clear both cheeks; the first E minimum radius from the pivot is 2 1/4 in. The low cheek positive-quadrant corner radius is only sqrt(1 1/2 squared+1/2 squared)=1.58114 in. The full-pose drawing/check also includes the actual cover thickness, screw heads and joint play.

13. Cut two continuous J starting blanks 32 in long. Receive actual single-layer t .040.. .060, width 31/32..1 1/32; reject a splice or fray. Fold 1/2 in under each end and trap a full 1 1/2 in two-layer engagement under K. The two fixed K are on A at X -2 or 32 centers, Z 14 5/8..16 1/8; the two moving K sit on C at the same X centers, Y 20..21 1/2.

14. Use two W5 per K at X center+/-5/8; fixed Z 15 3/8 and rack Y 20 3/4. These screws lie OUTSIDE the complete webbing edge, not through a cut textile margin. Actual 1/4 in K plus two layers .080.. .120 leaves .380.. .420 in nominal receiving penetration from 3/4 in screws. Drill full 7/16 in receiver plus measured point<=1/16 and stop allowance<=1/64, total<=33/64, leaving at least .224375 in at .740 wood gauge.

15. With the empty ladder on both hard stops and a helper holding C, set both ties just taut without lifting an arm off G. The free top-strand exit coordinates are B=(Y .75+1.5 t, Z 16.125) and A=(Y 20, Z 1.125+1.5 t), before actual edge rounding; their chord is sqrt((19.25-1.5 t)^2+(15-1.5 t)^2). At t .045 this is approximately 24.31 in. It is not the 32 in blank or a rated stretched length. Measure both real routes, allow actual bends, clamp, trim surplus and retain both folded tails. Reject unequal routes or slipping clamps.

16. Support the EMPTY C and raise it slowly from 0 to 90 degrees. A helper keeps the complete left tie and its slack inside X -2 17/32..-1 15/32 and the right inside 31 15/32..32 17/32 throughout; never let a bight enter rods, cheeks or a pin. At vertical, match-drill H and the actual B arm for the 9/32 park path at nominal Y 2 1/4, Z 15 1/4. Keep the ladder supported until both pins and their actual retainers are fitted.

17. Before inserting EITHER park pin, have the helper keep ALL slack against A at Y 3/4..1 1/2 in inside its outboard X lane; maintain that band while either pin or cotter is handled. Prepare I in a clamped metal cradle:3/32 crossholes 1/8 from both ends, blunt all edges. Fit each pin through the outboard H and complete arm at the supported stowed pose; left span -1 1/2..2 and right mirror. Fit P5 cotters outside both bearing bodies, radial stops>=3/16 and full radial envelope<=3/8, smooth tails. Both retainers must remain outside their holes throughout axial play. Only after BOTH pins carry the empty park position, hold the entire slack against A at Y 3/4..1 1/2, then fold it in those outboard lanes and secure the two T1 keeper bands around ONLY the folded slack together with its anchored/return webbing strand within that same X/Y band, never around the whole backboard. If the actual bundle does not fit a 6..7 in keeper, refold the slack under helper control; do not substitute a loaded support or enlarge the allowed fabric band. This keeps the parked fabric behind the cotters, whose nominal nearest Y is 1 7/8 (at the nominal axis). Receive the complete pin/cotter assembly, including bore and axis play, at actual Y>=1 13/16. During pin insertion/removal the helper maintains that same rearward fabric band.

18. To deploy, remove all cloth, take C by both ends with a helper, undo the keeper bands and hold the ENTIRE slack in the same OUTBOARD X lanes AND against A within Y 3/4..1 1/2 in. Maintain this rearward Y band until BOTH parking pins are fully withdrawn. Remove each inner cotter and pull its complete pin outward while the helper controls C. Only after both pins are out, guide every bight in its outboard X lane while lowering the ladder to BOTH G stops. Inspect both straps/clamps and full clearances before hands are released. Begin only with a small wrung cloth spread across rods; no mass or drying performance was tested. Never move a loaded rack or hang a person or a heavy wet blanket from it.

19. For rod service, keep the empty rack horizontal on BOTH G with ties seated and C controlled. Remove the two covers for one D, then withdraw that rod straight out the reserved side by at least 31 in. Its route is in front of the lower/upper receivers and below the taut outboard tie, not through a wall. Refit the rod and both covers before returning to use. Wash/dry actual cloth-contact surfaces appropriately; no sanitation or preservation claim is made.

20. For tie or pivot service, empty first and have a helper support the complete ladder BEFORE releasing any joint. Set both park pins when possible, but do not treat one pin as a person-rated support. Counterhold actual pivot heads/nuts, remove both pivot bolts and then park pins only while the helper fully carries the frame; take the complete ladder away. Inspect bore ovality, cracks, bent pins, threads and cotter shapes. Refit with the same washers/clearances, reset ties on both hard stops, fit new damaged retainers and repeat every empty supported movement check.

Acceptance before use

01. Both backboards end at Z 17, above fixed clamps but below parked front-rail hardware; top mounting washer centers are Z 16 1/2. Both backboard-to-backing stacks have full specified sections, flat seating, rear access and 2 full threads; no unknown wall approval inferred.

02. All four lower receiver tops are Z+1/2, not+1 3/4. Every front/downward stop supports its arm at 0 degrees; the rear swinging tail remains clear.

03. Rod outside span, lengths, bore fit, complete cover rows and axial engagement are received before use; no rod end or cover screw can escape the specified retained route.

04. Both pivot joints retain their full hardware stack and 1/32..3/32 running clearance, with clear head/nut/tip envelopes at all 0..90 degree poses.

05. Every arm, rod, end cover and its pan head clears the fixed lower cheeks, park cheeks, stop fixings and wall bolt heads through the full supported fold.

06. Both independent park pins and all 4 actual cotters are seated; actual cotter envelopes/stops and whole pin play pass before helper releases C.

07. Both support ties are just taut on G, with no slip or fray. Every moving/slack textile portion stays in its outboard lane under helper control; keepers retain folded slack only after parking.

Care and repeat checks

Inspect rods, captured end covers, receivers, all fasteners, backing and textile ends each use; repeat empty supported checks after any repair or material substitution.

Keep the rod-contact finish smooth and appropriate for damp household cloth. Dry the assembly after airing; do not leave wet cloth bunched on a rod or soak wood joints.

Replace a frayed tie, split receiver, oval bore, bent pin or damaged cotter. No original build, load, wet-cloth, drying, automatic folding or durability trial is claimed.

Primary context and original design

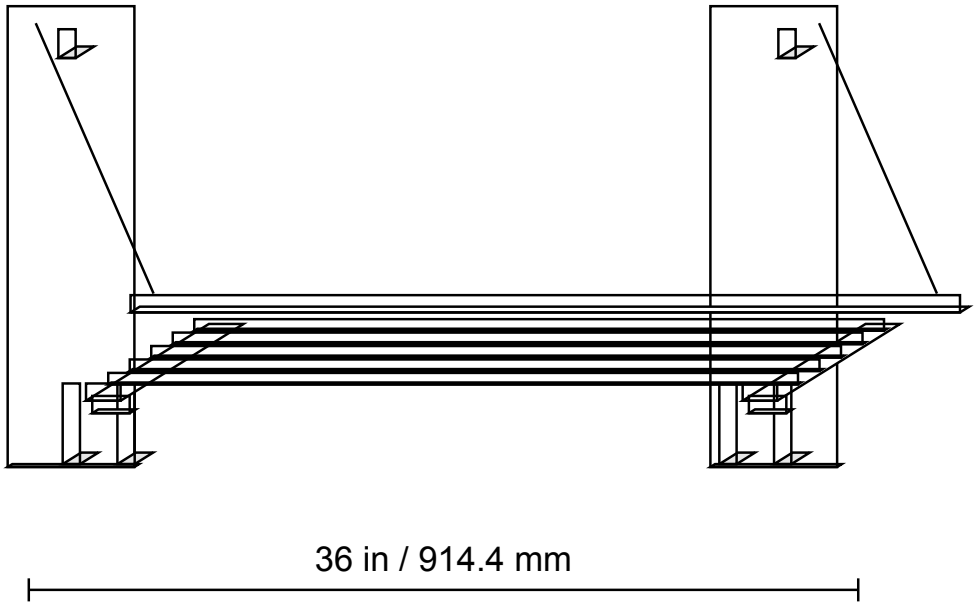
Original wood geometry, instructions and B/W vector plates. Sources identify actual hardware/material context; they do not endorse or test this apparatus.

S4 / Sailrite Gray Polyester Webbing, SKU PLLWGY. Identifies flat polyester and published nominal .045 in thickness, width variation+/-1/32 and possibility of splices. Actual unspliced gauge is received. Published breaking strength is NOT a safe load or clamp/attachment rating for this rack.

S3 / NBK inch-thread dimensional context. Ordinary inch hardware is specified by actual received envelopes. No supplier rating for the assembled rack or wall is inferred.

01 / One folding drying rack

HO-039 | Open rod ladder, short backboards and two independent vertical parking pins



A backboards: 20 in high, Z -3..17. Their short top avoids the parked moving strap plates and pan heads.

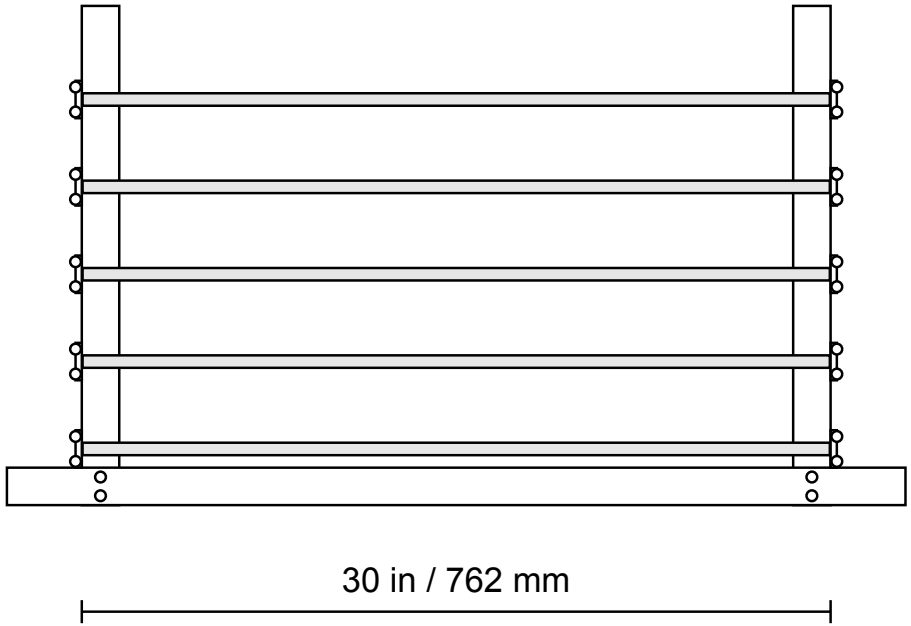
Rack frame outside span 30 in; front rail 36 in. Five mechanically retained rods, 29 15/16 in each. No glue conceals an end joint.

Lower receivers run Z -3..+1/2. Upper park receivers are OUTBOARD with actual arm gap >=1/4 in. Do not center the lower cheeks vertically.

Two hard stops set horizontal 0 degrees. Two outboard ties share front support. Empty rack folds UP to 90 degrees; both parking pins and cotters are fitted before hands are released.

02 / Rods, covers and complete screw rows

HO-039 | OPEN PLAN: full moving parts, not only rod centerlines



Rod axes Y 5 1/4, 8 3/4, 12 1/4, 15 3/4, 19 1/4; Z 0. Actual D .495.. .505; bores .523.. .539 in.

E: ten separate covers, 1/4 X x 1 1/2 Y x 3/4 Z. Two #4 x 1 in pan screws per cover at Y rod +/-1/2, Z 0. Covers capture the rod ends without piercing them.

Five rods: L 29 15/16 +/-1/64. Actual outside span 30 +/-1/32; no forced long rod. Worst conservative opposite insertion still leaves >1 1/4 in engagement.

C sits ON TOP of the arms. Four #8 x 1 1/4 in axes: X 3/4 or 29 1/4; Y 20 3/8 or 21 1/8. Full tips end at Z -1/8, inside the arm.

ROD SERVICE: empty horizontal rack on both stops; ties seated and front rail controlled. Remove both covers of one rod, then withdraw it straight toward the reserved 32 in side zone.

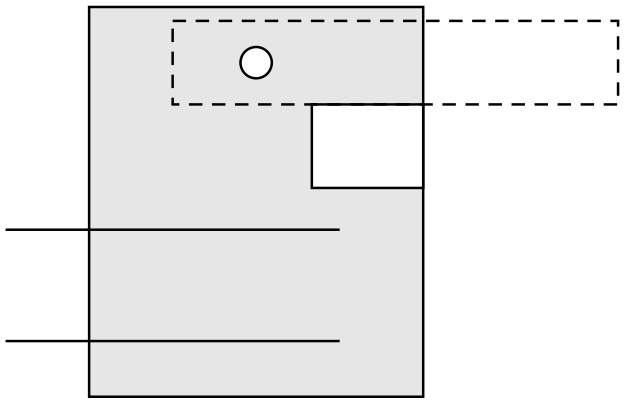
03 / Actual receivers and captured park pins

HO-039 | Lower YZ section, axial pivot stack and upper outboard park

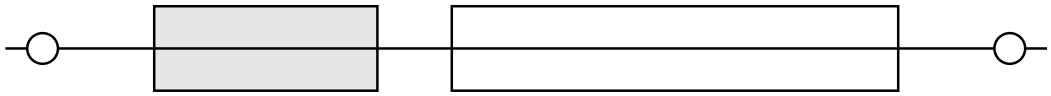
F top Z +1/2; bottom -3

Lower gap 1 5/8 in: arm 1 1/2 + two 1/32 thrust washers + nominal 1/16 running clearance. Actual 1/32..3/32; lock nuts without squeezing the arm.

P1 1/4 x 4 in complete bolts; two outside 1/16 washers and one nylon nut each. Check 2 full threads, head/nut/tip envelope and hand-supported free motion.



Park section (left, X):

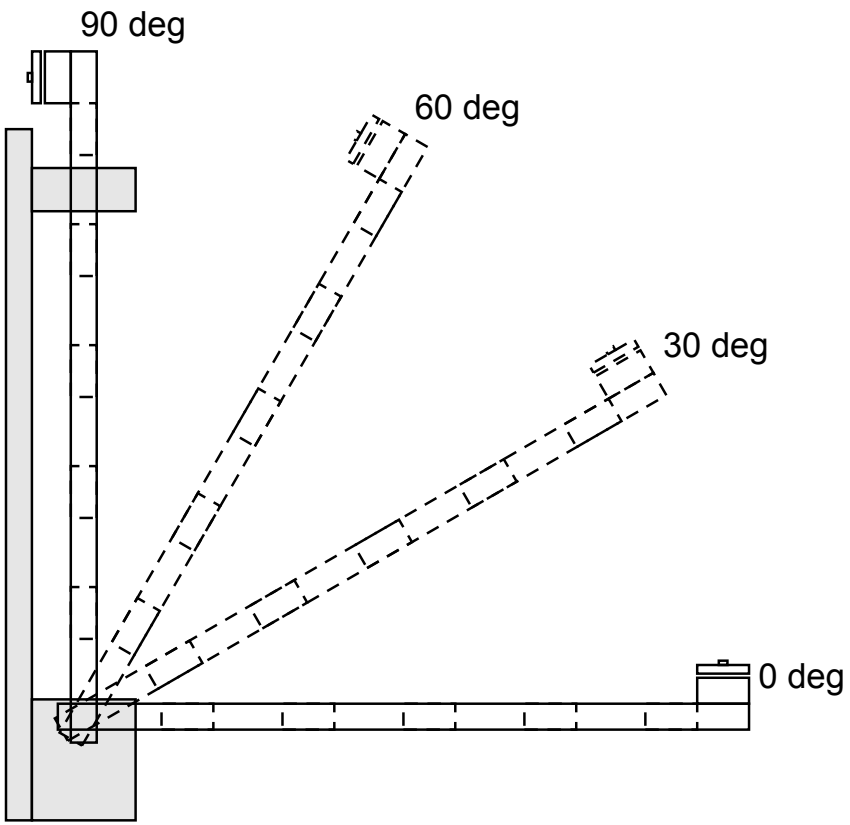


Pin span -1 1/2..2. Crossholes -1 3/8 and 1 7/8. Receiver -1..-1/4; arm 0..1 1/2. Right is mirrored.

Cotter WHOLE radial envelope <=3/8; axial half <=1/8; radial stop >=3/16. Both cotters stay OUTSIDE bodies throughout actual pin play. Remove inner cotter; pull pin outward only with ladder supported.

04 / Whole fold, textile routes and service

HO-039 | SIDE YZ: complete end covers and clamp/head envelopes included



Fixed A top Z 17. Moving front clamp/head only enters Y<=3/4 above Z 17.68 nominal; all play and gauges still require the full clearance checks.

Tie thickness t .040.. .060. Free chord on stops: sqrt((19.25-1.5t)^2 +(15-1.5t)^2). At t .045: 24.31 in. Set the REAL route, not a 32 in finished span.

Helper keeps all folding slack in OUTBOARD lanes: left X -2 17/32..-1 15/32, right 31 15/32..32 17/32. No uncontrolled bight through the rack.

Keep ALL fabric at Y 3/4..1 1/2 against A throughout pin insertion/removal, until BOTH pins are out. Cotters stay at actual Y >=1 13/16. Fold slack only after BOTH pins engage; keepers carry slack only.